

# Dylan Steigers Protection of Youth Athletes Act Evaluation Summary Report

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*A collaborative work within the Montana Department of Public Health and Human Services*

## Introduction

The purpose of this study was to assess the overall knowledge of and compliance with The Dylan Steigers Protection of Youth Athletes Act (DSPYA Act). The DSPYA Act was created to protect and promote the health of youth athletes in Montana. This legislation requires each school district to adopt a policy addressing concussion awareness and safety protocols for participants in organized youth athletic activities. A survey was implemented in an effort to evaluate the DSPYA Act, with the goals of assessing: 1) the level of knowledge in the state regarding the DSPYA Act, 2) the accessibility of resources for effective implementation, and 3) the willingness of Montana communities to comply. The results of this survey demonstrate that while many schools already have a policy in place, there are still many who have either not yet created their policy or are unaware of the existence of a policy. Increasing communication between staff members at all levels, making concussion education materials more readily available for all parties involved, and including certified athletic trainers (ATCs) as licensed health care professionals in the language of the legislation would all strengthen the effectiveness of the DSPYA Act.

## Methods

The study population included coaches, athletic trainers, principals, school nurses, superintendents, and athletic directors. An electronic survey was disseminated to the Montana School Nurses Association, the Montana Athletic Trainers Association, the Office of Public Instruction (OPI), the Montana Education Association and the Montana Federation of Teachers, and the Governor's Traumatic Brain Injury Advisory Council. These organizations were instructed to further disseminate the survey link to all appropriate faculty or staff in schools around Montana currently serving any combination of kindergarten through twelfth grade students.

The electronic survey was available from April 21, 2014 through June 16, 2014. Instructions for survey participants were as follows upon logging into the survey:

*"In an effort to evaluate the effectiveness of the Dylan Steigers' Protection of Youth Athletes Act (SB112), this survey will assess the level of knowledge in the state regarding the act, the accessibility of resources for effective implementation of the act, and the willingness of Montana communities to participate.*

*It should take you between 5-10 minutes to complete this survey.*

*Your responses will be anonymous and confidential, so we ask that you answer them fully. We appreciate your assistance and are here to answer questions should you have any!"*

Survey responses were collected and analyzed by the Nutrition & Physical Activity Program and Injury Prevention Program staff through the Department of Public Health and Human Services. Data were analyzed through SAS statistical software, version 9.3 (SAS Institute, Inc., Cary, North Carolina).

## Results

### Description of survey respondents

The 164 survey respondents represented a wide range of occupations and school settings from across the state of Montana; 32 of the 56 counties had schools that chose to participate. Most respondents were coaches (30%), followed closely by certified athletic trainers (22%). See Table 1.

Table 1. Percentage of survey respondent occupations

Occupation	Respondents % (n)
Coach	30 (46)
Certified Athletic Trainer	22 (33)
Principal	18 (27)
School Nurse	16 (25)
Superintendent	8 (12)
Athletic Director	3 (5)
Other	3 (4)

The majority of respondents reported working with grades 9 through 12 (43%) and in schools with 0-250 enrolled students (31%). See Tables 2 and 3.

Table 2. Percentage of school settings by grade

School setting	Respondents % (n)
Grades 9 through 12	50 (58)
Grades K through 12	30 (34)
Grades K through 8	10 (12)
Grades 6 through 8	6 (7)
Grades K through 5	3 (3)

Table 3. Percentage of school settings by number of students enrolled

Enrollment	Respondents % (n)
0 to 250 students	31 (40)
251-500 students	22 (28)
501-1000 students	11 (14)
1001-1500 students	28 (35)
1501+ students	8 (10)

## Athletic activities offered in schools

The *Dylan Steigers Protection of Youth Athletes Act* (DSPYA Act) defines “organized youth athletic activity” as:

an athletic activity sponsored by a school or school district in which the participants are engaged in an athletic game or competition against another team, club, or entity, in practices, tryouts, training exercises, or sports camps, or in preparation for an athletic game of competition against another team, club, or entity.

In order to better understand the athletic landscape of Montana schools, respondents were asked several questions regarding how athletic activities are offered in their schools.

Almost all schools (98%) offer a physical education program as a regular part of student classwork. However, schools vary greatly in their offerings of what would be considered an “organized youth athletic activity.” Of great concern is the number of sports offered to youth athletes that are technically offered by a non-school organization. While these sports are identical to their “organized youth athletic activity” counterparts, or athletics offered by the school, they effectively bypass the DSPYA Act-imposed regulations.

Table 4 provides an overview of the type of sport offered, the percentage of activities sponsored by a school, and the percentage of activities sponsored by a non-school organization, listed alphabetically. The sports most likely to be offered by non-school organizations are baseball (57%), gymnastics (33%), and lacrosse (31%).

Table 4: Sports offered for youth athletes

Sport	Percent of respondents with school sponsored sport	Percent of respondents with non-school sponsored sport
Baseball	4	57
Basketball	91	1
Cheerleading	66	4
Cross country	81	2
Football	83	10
Golf	66	4
Gymnastics	1	33
Lacrosse	5	31
Soccer	49	21
Softball	55	19
Swimming	36	19
Track and field	92	0
Volleyball	90	1
Wrestling	66	12

## Health care professionals in schools

The results of this survey provided increased evidence that schools in Montana are woefully understaffed by health care professionals. More schools have a full-time school nurse than have a

full-time certified athletic trainer (ATC), but many schools lack even part-time coverage from either professional. See Table 5.

Table 5: Health care professional coverage in Montana schools

Healthcare professional	Respondents at schools with full-time coverage % (n)	Respondents at schools with part-time coverage % (n)	Respondents at schools with no coverage % (n)
Nurse	43 (41)	27 (26)	30 (28)
Certified athletic trainer	35 (35)	23 (23)	42 (41)

### Compliance with DSPYA Act

The DSPYA Act requires three things to occur within schools. First, a policy must be put in place addressing: the nature and risks of brain injuries; signs, symptoms, and behaviors associated with brain injuries; the need to alert licensed healthcare providers for urgent recognition and treatment; and the need for proper medical direction for treatment and return to play. Second, a form documenting the distribution of educational materials to inform youth athletes and their parents or guardians of the information in the policy must be signed and returned to school officials. Third, school districts must ensure that coaches, athletic trainers, and other school officials participating in organized youth athletic activities complete a concussion-specific training program that is consistent with the messages in the school policy at least once a year.

Respondents were asked if their school currently has a policy regarding concussion awareness in order to determine compliance with the first component of the DSPYA Act. Policies are in place in 81% of respondents' schools, 10% were currently developing or planning to develop a policy in the future, and 10% didn't know if they had a policy or plans for a policy. Almost all schools with policies have all four of the required components mandated by the DSPYA Act, outlined below in Table 6.

Table 6: Percentage of mandated components included in individual school policies

Policy component	Percent included in school policies
Lists nature and risks of brain injuries	92
Lists signs, symptoms, and behaviors associated with brain injury	97
Indicates need to alert licensed healthcare provider for urgent recognition and treatment	95
Indicates need for proper medical direction for treatment and return to play	97

Of the schools with an ATC (full or part-time) on staff, 96% had a concussion policy. However, only 81% of the schools without an ATC had a policy.

In order to assess compliance with the second component of the DSPYA Act, respondents were asked whether or not education materials are distributed and whether or not the school requires a signed form acknowledging receipt of concussion information to be returned to the school prior to the youth athlete's participation. Eighty-four percent of respondents replied that their school does distribute educational materials to youth athletes and their parents or guardians prior to

participation. However, only 65% of schools require that a form documenting the receipt of information be submitted to and returned by the youth athlete's parent or guardian.

Finally, to assess compliance with the third component of the legislation, respondents were asked about the system used to track annual trainings for faculty and staff members and what training resources were used by the school. Only 58% of respondents reported having a system in place to track annual training participation rates, and 30% of respondents didn't know whether they had a system or not. The majority of respondents stated their schools use the Montana High School Association website most often for information on concussion awareness and education (76%), followed by the Centers for Disease Control & Prevention (CDC) Heads UP website (26%), and the Brain Injury Alliance of Montana (9%). A substantial number (19%) of respondents didn't know what resources were used by their schools.

## Discussions

### Utilizing school nurses

School nurses could be more involved in the monitoring and care of youth athletes with concussions. While 22% of respondents reported working at a school with no nurse or ATC, full- or part-time, 48% of respondents had both and 30% had one or the other.

Generally, if a school has both an ATC and a school nurse, the two health care professionals have limited interaction. The school nurse works during the school day, and the ATC is primarily available after the school day ends. Efforts should be made to properly equip every school with a nurse and an ATC, and to create a system that enables partnership between them to provide better care for the youth athlete. Such a partnership would improve the youth athlete's access to team-based care, and remove the burden of reporting on their condition to multiple health care providers.

Currently, a tracking system to monitor students with chronic conditions such as asthma and diabetes is being developed by the Montana Department of Public Health and Human Services—Bureau of Chronic Disease Prevention and Health Promotion. If ATCs could access this system, they could update a youth athlete's chart with notes regarding their progress that the school nurse could then follow-up on the next day.

### Expand definition of organized youth athletic activity

The current definition of "organized youth athletic activity" only accounts for school-sponsored athletics. However, the results of this evaluation clearly show that there are many youth athletes in Montana who participate in sports that fall outside of this definition, and therefore find themselves without protection.

According to the Sports Concussion Institute (SCI) (2012), football is the most common sport for concussion diagnosis in males with a 75% chance of concussion; survey respondents reported that 10% of their youth athletes participated in football not sponsored by the school. There is a 50% chance for concussion while playing soccer (SCI, 2012); 21% of respondents said their youth athletes participate in soccer not sponsored by the school. The students who choose to play outside of school-sponsored activities are automatically placed outside of the protection of the law, and face greater risk of receiving a concussion that is not recognized or treated appropriately.

Cleared to Play (2013), a non-profit organization dedicated to raising concussion awareness, states “injuries associated with participation in sports and recreational activities account for 21% of all traumatic brain injuries among children in the United States.” This evaluation demonstrates that students are participating in recreational athletic activities while at school and also outside of their schools. In an effort to provide the same protections to youth athletes regardless of where they choose to play, the definition of “organized youth athletic activity” should be updated to include all youth athletic programs, regardless of sponsorship type.

### **Improve compliance and awareness of concussion policies**

Another finding of this evaluation is that when a concussion policy is in place or being developed, it is neither: a) known about by all staff/faculty, nor b) complied with to the extent required by the legislation. Every employee should know about the concussion policy in order to provide the best care for the affected youth athlete. Of respondents, people who were unaware of either the existence or development of a concussion policy ranged from the school nurse to the principal. Efforts should be made to improve access to and awareness of these necessary policies. Most respondents reported using the Montana High School Association website for information; this could be a useful tool for disseminating more information on concussion awareness.

In order to aid in compliance, it could be helpful to develop a policy template that schools could use as a draft. Such a template could provide model language that reflects all necessary parts of the policy in plain language to make implementation as simple as possible. This template could include a possible implementation timeline and ideas for efficiently communicating the policy and procedures to faculty and staff.

Finally, in order to ensure that the policy is being communicated effectively across Montana, it could be helpful to hold an annual audit at random schools to check for compliance.

### **The role of Certified Athletic Trainers (ATC)**

ATCs are specifically trained in the evaluation and management of concussions, as required by the current definition of “licensed healthcare professional” in section 3.2 of the DSPYA Act. According to the National Association of Athletic Trainers (NATA) (2010), athletic trainers are defined as:

health care professionals who collaborate with physicians to optimize patient and client activity and participation in athletics, work, and life. The practice of athletic training encompasses the prevention, examination and diagnosis, treatment, and rehabilitation of emergent, acute, subacute, and chronic neuromusculoskeletal conditions and certain medical conditions in order to minimize subsequent impairments, functional limitations, disability, and societal limitations. (p. 7)

However, the results of this evaluation suggest that the ATCs should be included, and directly mentioned, as a “licensed health care professional” under section 3, *Definitions*, subsection 2. The results demonstrate that a school with an ATC on staff, full- or part-time, is more likely to have a concussion policy in place. Also, of the schools with a policy, the ATCs were the second most likely to know that the policy existed, preceded by coaches. It is logical that ATCs would advocate for and

be most aware of concussion-friendly policies, as their training and education trains them specifically in concussion identification and management.

In fact, injuries associated with playing sports are the specialty of an athletic trainer, as opposed to other health care professionals who are responsible for a wide breadth of knowledge and may not specifically focus on sports medicine. Pleacher and Dexter (2006) found that many primary care providers find clinical guidelines for concussion management to be too confusing to put into regular practice, or simply aren't aware that current guidelines exist. Alternatively, athletic trainers must demonstrate several competencies to complete their education before they are eligible for certification and licensure, including: injury or illness prevention and wellness protection; clinical evaluation and diagnosis; immediate and emergency care; treatment and rehabilitation; and organizational and professional health and well-being (NATA, 2010). Specifically, a certified athletic trainer must proficiently perform the following concussion-related tasks (NATA, 2011):

- PHP-17c: Explain the etiology and prevention guidelines associated with the leading causes of sudden death during physical activity, including but not limited to traumatic brain injury (among others);
- CE-20f: Use standard techniques and procedures for the clinical examination of common injuries, conditions, illnesses, and diseases, including, but not limited to neurological assessments (among others);
- CE-21h: Assess and interpret findings from a physical examination that is based on the patient's clinical presentation, which can include neurologic function (among others); and
- AC- 36b: Identify the signs, symptoms, interventions and, when appropriate, the return-to-participation criteria for brain injury including concussion, subdural and epidural hematomas, second impact syndrome, and skull fractures (among others).

Although certified athletic trainers do meet the requirements of "licensed health care professional" as currently defined in the DSPYA Act, section 3.2, they are not currently clearly included in the language of the legislation. It is recommended that in order to spread concussion awareness and proper concussion management throughout schools, ATCs should be added, in clear language, to this definition.

The DSPYA Act refers to ATCs under section 4, *Youth athletes—concussion education requirements*, subsections 1 and 3 as a member of the youth athlete's team of caregivers while participating in school-sponsored sports. Evidence suggests that while ATCs are certainly a part of the youth athlete's team of caregivers, they also play a critical role. For example, Meehan, d'Hemecourt, Collins, and Comstock (2011) found that the athletic trainers were on site for at least 70% of concussions occurring in high school athletes during the 2009-2010 school year, while physicians were only present in 7.7% of the cases. LaBella (2012) found that concussions are much more likely to be diagnosed if an ATC is present; in fact, concussions were diagnosed 8 times more in girls' high school soccer and 4.5 times more in girls' basketball if a high school had an ATC on site. Due to the overwhelming body of evidence supporting the inclusion of ATCs in the care of youth athletes, Broglio, Cantu, Gioia, Guakieqicz, Kutcher, Palm, and McLeod (2014) recommend that "without exception, [athletic trainers] should be present at all organized sporting events at all levels of play and should work closely with a physician... to develop and implement a concussion-management plan" (p. 245). In accordance with this recommendation, states such as Virginia and New Jersey have included explicit language in their statewide concussion legislation that includes certified athletic trainers as a licensed health care professional. Montana should include ATCs as healthcare professionals in the language of the legislation, in addition to being a member of an athlete's team of caregivers.

## Strengths

This was the first survey to evaluate Montana's DSPYA Act (SB0112). This survey offers valuable data that will lead to the future development of more comprehensive and targeted evaluations. This information has been critical in the identification of possible action steps to improve the implementation of the concussion legislation.

## Limitations

There are some limitations to this evaluation. First, the survey relied on self-reported data, which can never be independently verified, are subject to recall bias and can potentially lead to respondents providing socially desirable answers. Second, while the survey was administered to a group of stakeholders to solicit feedback, it was determined upon analysis that there were gaps in question development. For example, one question had to be disregarded as it could be interpreted in multiple ways. Finally, since surveys could have been administered to multiple faculty and staff within the same school, there is no way to identify multiple responses from the same school.

## Conclusion

This evaluation was conducted in an effort to understand the effects of the implementation of the DSPYA Act. As a result of this evaluation, several recommendations can be made to improve the safety of youth athletes in Montana, as follows:

- Edit the language in the DSPYA Act to include both school sponsored and non-school sponsored sports as an "organized youth athletic activity" to provide better protection for youth athletes;
- Continue advocating for the inclusion of certified athletic trainers and school nurses in every school in Montana;
- Create a policy template that could be used by schools when developing their own policies;
- Include certified athletic trainers in language defining "licensed health care professionals; and
- Consider holding random audits for policy implementation in Montana schools.



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